

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number  
WO 2005/095625 A1

(51) International Patent Classification<sup>7</sup>: C12N 005/02,  
015/29

(21) International Application Number:  
PCT/IB2005/001771

(22) International Filing Date: 31 March 2005 (31.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/558,609 31 March 2004 (31.03.2004) US

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.



WO 2005/095625 A1

(54) Title: ARABINO GALACTAN PROTEIN COMPOSITIONS AND METHODS FOR FOSTERING SOMATIC EMBRYO-  
GENIC COMPETENCE

(57) Abstract: Methods for fostering somatic embryogenic competence of a plant cell or tissue by contacting the plant cell or tis-  
sue with an arabinogalactan protein (AGP) composition effective for fostering somatic embryogenic competence in plant species  
and varieties that are recalcitrant to somatic embryogenesis and/or regeneration are provided. AGP compositions useful for foster-  
ing somatic embryogenic competence are provided, including total AGP and an AGP RP-HPLC hydrophobic fraction, both from  
embryogenic callus, from plant varieties including cotton lines Coker 315, Siokra 1-4, and Sicala 40, including at concentrations  
ranging from about 0.0008 mg/L to about 100 mg/L. Methods for regenerating plants, producing transformed plants, and impeding  
somatic embryogenic competence are also provided. Plant culture media and methods for making useful AGP compositions and  
media are also provided. Amino acid and nucleotide sequences for peptides and proteins eluting in hydrophobic AGP fractions are  
also provided.